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A SWITCH TO SOYBEAN ACRES IN ILLINOIS?

In 2001, some analysts are suggesting that more soybeans and less corn will be planted in Illinois. This shift is expected because production costs have increased less for soybeans than for corn. In addition, the loan rate for soybeans compared to the loan rate for corn is out of line compared to historical average prices and favors soybean production. Budgets comparing the advisability of shifting from corn to soybeans are presented in this paper.

The following four tables show budgets listing revenue less variable costs (RLVC) for corn and soybean production given different preceding crops. Budgets for different regions are shown in different tables. The corn following soybeans and soybeans following corn budgets are based on data from Illinois Farm Business Farm Management records. The corn following corn and soybeans following soybeans budgets reflect adjustments to yields and costs. The major change is a reduction in yield when the preceding crop is the same as the planted crop. Agronomic research suggests that a ten percent yield drop occurs when the preceding crop is the same as the planted crop.

Revenue less variable costs (RLVC) in Northern Illinois for soybeans following soybeans is projected to be \$130 per acre in 2001 (Table 1). This is uneconomical compared to planting corn. RLVC for corn following soybeans is \$160 per acre (Table 1). In no region of the state is soybeans following soybean projected to be more profitable than corn following soybeans.

In the budgets, a \$2.20 corn price and a \$5.45 soybean price are used in determining revenue. The corn price is above the loan rate while the soybean price is at the loan rate. Given current futures prices, these prices are reasonable forecasts. However, lowering the corn price to the loan rate (\$1.95) changes the comparisons. In northern Illinois, RLVC for corn following soybeans is \$121 per acre, below the soybean following soybeans' RLVC of \$130. For central Illinois high-quality farmland, corn following soybeans' RLVC is \$137 per acre, above soybean following soybeans' RLVC of \$129. For central Illinois low-quality farmland, corn following soybean's RLVC is \$111 per acre, below soybean following soybeans' RLVC of \$121. In southern Illinois, corn following soybeans' RLVC is \$66 per acre, below soybean following soybeans' RLVC of \$81.

Budgets do not indicate a shift to soybean acres is warranted when prices suggested by current future markets are used in the comparisons. Using loan rate prices may suggest a shift, particularly in southern Illinois and on low productivity farmland in central Illinois. Overall, budgeted amounts do not suggest a major shift from corn to soybeans is warranted.

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**Table 1. Projected Revenue Less Variable Costs for Different Crops
Northern Illinois, 2001.**

	Corn Following Soybeans	Corn Following Corn	Soybeans Following Corn	Soybeans Following Soybeans
Average yields (bu. per acre)	153	145	49	44
Price received (per bu.)	\$2.20	\$2.20	5.45	\$5.45
Revenue per acre	\$337	\$319	\$267	\$240
Variable costs per acre				
Fertilizer and lime	\$56	\$61	\$19	\$19
Pesticides	32	39	33	33
Seed	34	34	19	19
Drying and storage	15	14	6	5
Machinery repair, fuel, and hire	<u>40</u>	<u>40</u>	<u>34</u>	<u>34</u>
Total variable costs	\$177	\$188	\$111	\$110
Revenue less variable costs	\$160	\$131	\$156	\$130

**Table 2. Projected Revenue Less Variable Costs for Different Crops
Central Illinois, High Productivity Farmland, 2001.**

	Corn Following Soybeans	Corn Following Corn	Soybeans Following Corn	Soybeans Following Soybeans
Average yields (bu. per acre)	158	148	50	45
Price received (per bu.)	\$2.20	\$2.20	5.45	\$5.45
Revenue per acre	\$348	\$326	\$273	\$245
Variable costs per acre				
Fertilizer and lime	\$58	\$63	\$20	\$20
Pesticides	32	39	33	33
Seed	33	34	19	19
Drying and storage	16	17	6	6
Machinery repair, fuel, and hire	<u>32</u>	<u>34</u>	<u>28</u>	<u>38</u>
Total variable costs	\$171	\$187	\$106	\$116
Revenue less variable costs	\$177	\$139	\$167	\$129

**Table 3. Projected Revenue Less Variable Costs for Different Crops
Central Illinois, Low Productivity Farmland, 2001.**

	Corn Following Soybeans	Corn Following Corn	Soybeans Following Corn	Soybeans Following Soybeans
Average yields (bu. per acre)	143	130	45	40
Price received (per bu.)	\$2.20	\$2.20	5.45	5.45
Revenue per acre	\$315	\$286	\$245	\$218
Variable costs per acre				
Fertilizer and lime	\$57	\$62	\$18	\$18
Pesticides	29	36	30	30
Seed	34	34	18	18
Drying and storage	15	14	5	4
Machinery repair, fuel, and hire	<u>33</u>	<u>35</u>	<u>27</u>	<u>27</u>
Total variable costs	\$168	\$181	\$98	\$97
Revenue less variable costs	\$147	\$105	\$147	\$121

**Table 4. Projected Revenue Less Variable Costs for Different Crops
Southern Illinois, 2001.**

	Corn Following Soybeans	Corn Following Corn	Soybeans Following Corn	Soybeans Following Soybeans
Average yields (bu. per acre)	122	106	40	35
Price received (per bu.)	\$2.20	\$2.20	5.45	5.45
Revenue per acre	\$268	\$233	\$218	\$191
Variable costs per acre				
Fertilizer and lime	\$62	\$68	\$22	\$22
Pesticides	31	40	31	31
Seed	33	32	21	21
Drying and storage	8	7	3	3
Machinery repair, fuel, and hire	<u>38</u>	<u>38</u>	<u>33</u>	<u>33</u>
Total variable costs	\$172	\$185	\$110	\$110
Revenue less variable costs	\$96	\$48	\$108	\$81